Atty Docket No. VOR-002

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF THE CLAIMS:

1. (Original) A separation system for separating floating and non-floating particulate from a fluid, the system comprising:

a) a tank having a bottom and interior sidewalls to define a storage chamber, an inlet at a first location on the interior sidewalls for receiving the fluid, and an outlet at a second location on the interior sidewalls for transferring the fluid out of the tank;

b) a baffle having a bottom, a first side baffle wall, a second side baffle wall and a port through from the first side baffle wall to the second side baffle wall, the baffle connected to the interior sidewalls of the tank, the bottom of the baffle spaced above the bottom of the tank to establish a storage chamber outlet for fluid within the storage chamber to pass along the second side baffle wall to the outlet;

c) a bypass including an inlet flow control means on the second side baffle wall between the inlet and the port of the baffle and an outlet flow control means on the second side baffle wall between the storage chamber outlet and the outlet; and

d) a weir positioned between the inlet flow control means and the outlet flow control means, the weir configured to divert fluid from the inlet to the baffle port under relatively low fluid flows and to divert one portion of the fluid from the inlet to the baffle port and to allow the remaining portion of the fluid to flow from the inlet to the outlet under relatively high fluid flows.

2. (Original) The system as claimed in Claim 1 wherein the bypass includes a bypass plate attached between the second side baffle wall and the interior sidewalls of the tank.

3. (Original) The system as claimed in Claim 2 wherein the inlet flow control means is the space defined by the region between the inlet, the second side baffle wall, the interior sidewalls of the tank, the bypass plate and the weir.

4. (Original) The system as claimed in Claim 2 wherein the outlet flow control means is the space defined by the region between the outlet, the second side baffle wall, the interior walls of the tank, the bypass plate and the weir.

5. (Original) The system as claimed in Claim 4 wherein the bypass plate in the outlet flow control means space includes one or more ports.

6. (Original) The system as claimed in Claim 2 wherein the bypass plate is in a declined orientation from the inlet of the tank to the outlet of the tank.

7. (Original) The system as claimed in Claim 1 wherein the weir is a curved plate.

8. (Original) The system as claimed in Claim 1 wherein the weir is a flat plate angled from the inlet of the tank toward the baffle port.

9. (Original) The system as claimed in Claim 1 wherein the interior sidewalls of the tank are corrugated.

10. (Original) The system as claimed in Claim 1 wherein the baffle is curved.

11. (Currently amended) The system as claimed in Claim 10 wherein the baffle has a complex curvature including a first curvature aspect and a second curvature aspect[, wherein the first curvature aspect includes the baffle port and terminates at an interface with the weir, and the second curvature aspect terminates at an interface with the interior sidewalls of the tank].

12. (Original) The system as claimed in Claim 11 wherein the weir has a curved configuration substantially matching a curvature of the second curvature aspect.

13. (Original) The system as claimed in Claim 12 wherein the weir and the second curvature aspect are formed together as a unitary structure.

14. (Original) The system as claimed in Claim 1 wherein the bottom of the baffle is shaped to substantially follow the shape of the particulates trajectory within the storage chamber.

15. (Original) The system as claimed in Claim 1 wherein the opening defined by the baffle port is shaped such that it is spaced away from the bypass plate near the inlet and approaches the bypass plate toward an interface of the baffle and the weir.

16. (Original) The system as claimed in Claim 1 wherein the weir has a wall height such that its top exceeds the height of the top of the baffle port.

17. (Original) The system as claimed in Claim 1 wherein the outlet flow control means includes a bypass plate and a secondary flow control wall with an outlet port therein, the outlet port configured to transfer fluid from the storage chamber to the tank outlet.

18. (Original) The system as claimed in Claim 17 wherein the secondary flow control wall is vertically oriented with respect to the tank bottom.

19. (Original) The system as claimed in Claim 17 wherein the inlet flow control means includes a weir cover plate attached to the weir and to the secondary flow control wall.

20. (Original) The system as claimed in Claim 17 wherein the bypass plate includes an upstream section and a downstream section divided from the upstream section by the secondary flow control wall, the upstream section including an aperture.

21. (Original) A separation system for separating floating and non-floating particulate from a fluid, the system comprising:

a) a tank having a tank bottom and a storage chamber bottom spaced above the tank bottom and interior sidewalls, the interior side walls and the storage chamber bottom defining a storage chamber, an inlet at a first location on the interior sidewalls for receiving the fluid from an upstream conduit, and an outlet at a second location on the interior sidewalls for transferring the fluid to a downstream conduit;

b) a baffle having a bottom attached to the storage chamber bottom, a first side baffle wall, a second side baffle wall and a port through from the first side baffle wall to the second side baffle wall, the baffle connected to the interior sidewalls of the tank;

c) a standpipe substantially centered within the storage chamber and establishing a passageway between the storage chamber and the outlet chamber, the outlet chamber for receiving fluid from the storage chamber and in communication with a region between the second side baffle wall and a portion of the interior sidewalls of the tank;

d) a bypass including an inlet flow control means on the second side baffle wall between the inlet and the port of the baffle and an outlet flow control means on the second side baffle wall between the outlet chamber and the outlet; and

e) a weir positioned between the inlet flow control means and the outlet flow control means, the weir configured to divert fluid from the inlet to the baffle port under relatively low fluid flows and to divert one portion of the fluid from the inlet to the baffle port and to allow the remaining portion of the fluid from the inlet to the outlet under relatively high fluid flows.

22. (Original) The system as claimed in Claim 21 wherein the bypass includes a bypass plate attached between the second side baffle wall and the interior sidewalls of the tank.

23. (Original) The system as claimed in Claim 22 wherein the inlet flow control means is the space defined by the region between the inlet, the second side baffle wall, the interior sidewalls of the tank, the bypass plate and the weir.

24. (Original) The system as claimed in Claim 22 wherein the outlet flow control means is the space defined by the region between the outlet, the second side baffle wall, the interior walls of the tank, the bypass plate and the weir.

25. (Original) The system as claimed in Claim 24 wherein the bypass plate in the outlet flow control means space includes one or more ports.

26. (Original) The system as claimed in Claim 22 wherein the bypass plate is in a declined orientation from the inlet of the tank to the outlet of the tank.

27. (Original) The system as claimed in Claim 21 wherein the weir is a curved plate.

28. (Original) The system as claimed in Claim 21 wherein the weir is a flat plate angled from the inlet of the tank toward the baffle port.

29. (Original) The system as claimed in Claim 21 wherein the interior sidewalls of the tank are corrugated.

30. (Original) The system as claimed in Claim 21 wherein the standpipe includes a bellmouth port and a crucifix therein.

31. (Original) The system as claimed in Claim 21 wherein the standpipe includes a bellmouth port and a standpipe cover spaced above and attached to the bellmouth port.

32. (New) A separation system for separating floating and non-floating particulate from a liquid, the system comprising:

a tank structure having a bottom, an inlet for receiving liquid, and an outlet for transferring liquid out of the tank structure, the tank structure including a storage chamber for retaining floating and non-floating particulate;

a bypass flow path within the tank structure, the inlet delivers liquid to the bypass flow path and the outlet receives liquid from the bypass flow path, the bypass flow path defined in part by a bypass floor spaced at a level above a level of the bottom of the tank structure and a baffle member extending upwardly from the bypass floor, the upwardly extending baffle member includes a baffle port therein for permitting liquid to exit the bypass flow path and enter the storage chamber, the bypass floor includes an opening to permit liquid to reenter the bypass flow path, wherein a baffle member extends downwardly from the bypass floor and in part defines a passage to the bypass floor opening, the upwardly extending baffle member is curved in a region of the baffle port;

a weir positioned in the bypass flow path between the inlet and the outlet, the weir configured such that (i) under relatively low incoming liquid flows liquid is directed by the weir

from the inlet through the baffle port and (ii) under relatively high incoming liquid flows one portion of liquid is directed by the weir from the inlet through the baffle port and a remaining portion of liquid flows along the bypass flow path from the inlet to the outlet without passing through the baffle port.

33. (New) The system as claimed in Claim 32 wherein the downwardly extending baffle member is curved.

34. (New) The system as claimed in Claim 32 wherein the upwardly extending baffle member and the downwardly extending baffle member are formed by a common wall member, the upwardly extending baffle member and the downwardly extending baffle member having common curvature.

35. (New) The system as claimed in Claim 32 wherein the baffle port is shaped such that it is spaced away from the bypass floor nearer the inlet and approaches the bypass floor further from the inlet.

36. (New) The system as claimed in Claim 32 wherein the baffle member is adjacent to the bypass floor.

37. (New) A separation system for separating floating and non-floating particulate from a fluid, the system comprising:

a) a tank having a bottom and interior sidewalls establishing a storage chamber, an inlet for receiving the fluid, and an outlet for transferring the fluid out of the tank;

b) a baffle having a bottom and an opening, wherein the baffle is configured to direct fluid entering the tank to pass from behind the baffle through the opening into the storage chamber along the interior sidewalls thereof, the baffle positioned within the tank, the bottom of the baffle spaced above the bottom of the tank;

c) a weir positioned between the inlet and the outlet, the weir configured to divert fluid from the inlet to the baffle opening under relatively low fluid flows and to divert one

portion of the fluid from the inlet to the baffle opening and to allow the remaining portion of the fluid to flow from the inlet to the outlet under relatively high fluid flows; and

d) means between the inlet and the outlet behind the baffle to allow fluid to flow directly from the inlet to the outlet without passing through the baffle opening.

38. (New) The system as claimed in Claim 37 wherein the means between the inlet and the outlet is a bypass flow path, wherein the inlet delivers fluid to the bypass flow path and the outlet receives fluid from the bypass flow path.

39. (New) The system as claimed in Claim 38 wherein the bypass flow path includes a bypass floor spaced at a level above a level of the bottom of the tank, wherein the baffle is adjacent to the bypass floor and extends upwardly and downwardly from the bypass floor, wherein the bypass floor includes an opening to permit fluid to reenter the bypass flow path from behind the baffle.